

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,964	11/21/2003	11/21/2003 William Dale Jones		4419
28960	7590 07/18/2005		EXAMINER	
	OCK & OWENS LLP		KOCZO JR, MICHAEL	
162 NORTH WOLFE ROAD SUNNYVALE, CA 94086			ART UNIT	PAPER NUMBER
5511111111	2, 0.1 7.000		3746	

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary		Application No.	Applicant(s)			
		10/718,964	JONES ET AL.			
		Examiner	Art Unit			
		Michael Koczo, Jr.	3746			
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
THE - Exte after - If the - If NO - Failu Any	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. nsions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. e period for reply specified above is less than thirty (30) days, a reply period for reply is specified above, the maximum statutory period we are to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	6(a). In no event, however, may a reply be tim within the statutory minimum of thirty (30) days ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI	nely filed s will be considered timely. the mailing date of this communication. O (35 U.S.C. § 133).			
Status						
1)⊠	Responsive to communication(s) filed on 13 Ju	ne 2005.				
· · · · ·	This action is FINAL . 2b) This action is non-final.					
3)□	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
5)⊠ 6)⊠ 7)□ 8)□ Applicati 9)□	Claim(s) 1 and 3-33 is/are pending in the applic 4a) Of the above claim(s) is/are withdraw Claim(s) 20-29 and 31-33 is/are allowed. Claim(s) 1,3-19 and 30 is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restriction and/or in the specification is objected to by the Examiner. The description (s) find an 43 type 2005 is/are allowed.	n from consideration. election requirement.				
10)[2]	10) The drawing(s) filed on 13 June 2005 is/are: a) accepted or b) objected to by the Examiner.					
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).					
11)	11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.					
Priority u	ınder 35 U.S.C. § 119					
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 						
Attachment	(s)					
	e of References Cited (PTO-892)	4) Interview Summary (
3) 🔲 Inform	e of Draftsperson's Patent Drawing Review (PTO-948) nation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) No(s)/Mail Date	Paper No(s)/Mail Dat 5) ☐ Notice of Informal Pa 6) ☐ Other:				

DETAILED ACTION

Applicant's arguments filed on June 13, 2005 have been fully considered but they are not persuasive.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: numeral 220. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

In claim 1, "corrosion resistant bearings" is an unbased comparison and is therefore indefinite. That is, to what degree are the bearings corrosion resistant? Furthermore, whether or not a bearing is corrosion resistant is also a function of the fluid being pumped, which fluid is beyond the scope of the claims.

Art Unit: 3746

Claims 5 and 30 contain the trademark/trade name Cronidur® 30. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe the bearing races and, accordingly, the identification/description is indefinite. Applicant argues that there is only one product that uses the name Cronidur® 30. However, there is no guarantee or requirement that only said product will use the name Cronidur® 30. That is, the product composition could change, which renders the claims as indefinite.

Claim Rejections - 35 USC § 103

Claims 1, 3, 4 and 8 to 19, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Pezzillo in view of Harland and Lungu.

Pezzillo discloses a motor driven pump wherein the pump fluid circulates through the motor and back to the pump through filters 89 and 87. The stator and the rotor are encased by non-magnetic sleeves 44 and 64, respectively, made of stainless steel. However, Pezzillo does not specify that the motor is a DC motor, that the rotor is potted in epoxy, and that the stator sleeve is a polymer sleeve. Harland discloses a motor driven pump wherein the pump fluid circulates through the motor and wherein the rotor is potted in epoxy (col. 2, 1. 60). The epoxy

Art Unit: 3746

integrates the rotor laminations to provide structural integrity. Lungu discloses a brushless DC motor having a controller, which motor drives a pump wherein the stator is sealed from the fluid via a polymer sleeve in order to prevent the possibly corrosive fluid from entering the stator windings. Stainless steel and polymers are equivalent to the extent that both are resistant to corrosion. The advantage of brushless DC motors is that they are speed controllable and do not require brushes and commutators. In view of these teachings, it would have been obvious to provide the motor of Pezzillo with control means for operating it as a brushless DC motor, to embed the rotor in epoxy, and to substitute a corrosion resistant polymer sleeve for the stainless steel sleeve 44.

The specific dimensions as recited in claims 9 and 10 are mere matters of design choice depending on the desired throughput of the pump. No unexpected or unobvious result is disclosed which can be attributed to these dimensions.

The pump of Pezzillo, as modified, is inherently capable of attaining a speed of 60,000 rpm (claim 11), of attaining a pressure of 1,500 to 3,000 psi (claim 12), and of pumping supercritical carbon dioxide, alone or admixed with an additive or solvent. These limitations do not define structurally over Pezzillo, but merely recite the intended use of the pump and the desired manner of operation of the pump.

The prior art could not be applied to claims 5 and 30 because the limiting effect of the trademark/trade Claims 1 to 4, 6, and 8 to 19, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Pezzillo in view of Harland and Lungu.

Pezzillo discloses a motor driven pump wherein the pump fluid circulates through the motor and back to the pump through filters 89 and 87. The stator and the rotor are encased by

Art Unit: 3746

non-magnetic sleeves 44 and 64, respectively, made of stainless steel. However, Pezzillo does not specify that the motor is a DC motor, that the rotor is potted in epoxy, and that the stator sleeve is a polymer sleeve. Harland discloses a motor driven pump wherein the pump fluid circulates through the motor and wherein the rotor is potted in epoxy (col. 2, 1. 60). The epoxy integrates the rotor laminations to provide structural integrity. Lungu discloses a brushless DC motor having a controller, which motor drives a pump wherein the stator is sealed from the fluid via a polymer sleeve in order to prevent the possibly corrosive fluid from entering the stator windings. Stainless steel and polymers are equivalent to the extent that both are resistant to corrosion. The advantage of brushless DC motors is that they are speed controllable and do not require brushes and commutators. In view of these teachings, it would have been obvious to provide the motor of Pezzillo with control means for operating it as a brushless DC motor, to embed the rotor in epoxy, and to substitute a corrosion resistant polymer sleeve for the stainless steel sleeve 44.

The specific dimensions as recited in claims 9 and 10 are mere matters of design choice depending on the desired throughput of the pump. No unexpected or unobvious result is disclosed which can be attributed to these dimensions.

The pump of Pezzillo, as modified, is inherently capable of attaining a speed of 60,000 rpm (claim 11), of attaining a pressure of 1,500 to 3,000 psi (claim 12), and of pumping supercritical carbon dioxide, alone or admixed with an additive or solvent. These limitations do not define structurally over Pezzillo, but merely recite the intended use of the pump and the desired manner of operation of the pump.

The prior art could not be applied to claims 5 and 30 because the limiting effect of the trademark/tradename Cronidur® 30 could not be ascertained.

Applicant argues that Pezzillo discloses a pump where the bearings are sealed to protect the elements from the liquid being pumped. Pezzillo discloses two embodiments. In the figure 1 embodiment, a portion of the pumped fluid is diverted to space 96. The diverted fluid then flows through filter 85, through groove 94 in the bearing 78, through space 82, through filter 87, through shaft passage 84 and then back into the pump inlet. The bearings are therefore not sealed from the pumped fluid. In the figure 5 embodiment the bearings are sealed from the pumped fluid. The prior Office action was clearly referring to the figure 1 embodiment because it stated that "Pezzillo discloses a motor driven pump wherein the pump fluid circulates through the motor and back to the pump through filters 89 and 87."

Allowable Subject Matter

Claims 20 to 29 and 31 to 33 are allowed.

Claims 6 and 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3746

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Koczo, Jr. whose telephone number is 571-272-4830. The examiner can normally be reached on M-Th; 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached at 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/718,964 Page 8

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Koczo, Jr. Primary Examiner Art Unit 3746